IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Our Case No. 12569US01)

In The Application Of:	)	
	)	
MICHAEL L. HONIG	)	I hereby certify that this correspondence is
	)	being deposited with the United States Postal
Serial No.: 09/670,673	)	Service as first class mail in an envelope
	)	addressed to Commissioner for Patents, P.O.
Filed: September 27, 2000	)	Box 1450, Alexandria, VA 22313-1450
	)	on ___December 15, 2004___.
Examiner: Cicely Q. Ware	)	
	)	By: _____
Group Art Unit: 2634	)	
	)	Reg. No.: ___30,174___
For: REDUCED RANK ADAPTIVE	)	
FILTER	)	

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Office Action of June 21, 2004.

Claims 1-25 are at issue. Claims 5, 10 and 24 have been indicated allowable if rewritten in independent form. Claims 1-4, 6-9, 11-23 and 25 have been rejected.

The rejection of claims 1, 3, 4, 6-9, 11, 12, 14, 15, 17-19, 22, 23 and 25 as obvious in view of Posch and Honig et al. is respectfully traversed.

Each of claims 1-6 and 12-25 specifies generating a set of basis vectors where each successive basic vector is a function of a given or an estimated steering vector and successively greater powers of covariance matrix for a sequence of the received sample vectors of data. Neither of the cited references teaches this claimed feature. In particular, Posch does not disclose this feature at column 2, lines 37-67, column 3, lines 1-5 as the Examiner contends.

1

Instead of generating basis vectors wherein each is a function of successively greater powers of a covariance matrix as claimed, Posch, as cited by the Examiner, describes the use of an "eigenvalue decomposition of the CWSDM" where the CWSDM is a wave number cross-covariance matrix. An eigenvalue decomposition of the CWSDM is not the same as nor does it teach generating basis vectors as a function of successively greater powers of a covariance matrix for a sequence of received sample vectors of data as claimed. Because neither Posch nor Honig et al. discloses or teaches generating a set of basis vectors wherein each successive basic vector is a function of a given or estimated steering vector and successively greater powers of a covariance matrix for a sequence of received sample vectors of data as recited in claims 1-6 and 12-25, these claims are believed to be allowable under 35 U.S.C. §103.

Similarly, claims 7-11 recite "generating a reduced rank vector of digital data having a D x 1 dimension where D is less than N from the received sample vector of data and a matrix of D basis vectors of data wherein each successive basis vector of data is generated by multiplying an immediately preceding basis vector of data by the covariance matrix and the initial basis vector is formed from the steering vector of data." Neither Posch nor Honig et al. teaches this method of generating a reduced rank vector. As such, claim 7 is believed allowable over the cited references under 35 U.S.C. §103.

The rejection of claims 2, 13, 20 and 21 as obvious under 35 U.S.C. §103 in view of Posch, Honig et al. (Adaptive Reduced Rank Residual Correlation Algorithms for DS-CDMA Interference Suppression) and further in view of Honig et al. (Multi-user CDMA Receivers) is respectfully traversed. Each of dependent claims 2, 13, 20 and 21 is believed to be allowable for the reasons discussed above with respect to the respective independent claims 1, 12 and 18 from which these claims depend since the cited references do not teach generating a set of basis

vectors, wherein each basis vector is a function of successively greater powers of a covariance matrix for a sequence of received sample vec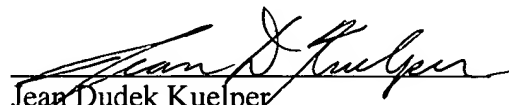tors of data as set forth in the independent claims. As such, claims 2, 13, 20 and 21 are believed to be allowable under 35 U.S.C. §103.

Claims 1-25 are believed to be allowable for the reasons discussed above.

Reconsideration and allowance of these claims is respectfully requested.

Respectfully submitted,

Dated: _December 15, 2004_

Jean Dudek Kuelper
Registration No. 30,171
Attorney for Applicants

McAndrews, Held & Malloy, Ltd.
500 West Madison St., 34th Floor
Chicago, IL 60661
312/775-8000